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09/097035
09/12/90

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Krom et al.

Serial No.: 097035

Filed: 6-12-90

Examiner:
WILSON
Group Art Unit:

1713

For: REACTION PRODUCT DERIVED FROM AMINE-FUNCTIONALIZED
ELASTOMERS AND MALEATED POLYOLEFINS

Assistant Commissioner for Patents
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

This invention relates to a reaction product prepared by reacting a first polymer having pendant or terminal carboxyl or anhydride groups with a second polymer (e.g. elastomer) having an amine containing terminal group. The second polymer is anionically polymerized. The second polymer is functionalized by reacting the growing anionic chain end with an imine and then a protic terminating agent terminates the growing chain end. The first and second polymers are reacted by mixing (desirably above their softening temperatures) and forming a blend with improved physical properties over a blend of similar polymers lacking a pendant amine group.

As authorized and encouraged under 37 C.F.R. §1.97-1.99, applicant hereby cites as a means of complying with the duty of disclosure set forth in 37 C.F.R. §1.56, the following patents and/or documents, copies enclosed, which the Examiner should consider with respect to the above-identified United States Patent Application:

U.S.

PATENT/DOCUMENT NO.	DATE	NAME/COUNTRY
4,622,352	11/11/86	Dijauw et al.
5,066,729	11/19/91	Stayer, Jr. et al.
5,153,159	10/06/92	Antkowiak et al.
5,153,271	10/06/92	Lawson et al.
5,227,431	07/13/93	Lawson et al.
5,274,106	12/28/93	Lawson et al.
5,310,798	05/10/94	Lawson et al.
5,354,822	10/11/94	Antkowiak et al.
5,491,230	02/13/96	Lawson et al.
5,494,976	02/27/96	Bender et al.
5,496,940	03/05/96	Lawson et al.
5,567,774	10/22/96	Schwindeman et al.

FOREIGN

PATENT/DOCUMENT NO.	DATE	NAME/COUNTRY
EP 563956 A2	06/10/93	Europe

ARTICLES

"Silylations with Bis(trimethylsilyl)acetamide a Highly Reactive Silyl Donor" by J.F. Klebe, H. Finkbeiner, and D.M. White in the Journal of the American Chemical Society by the American Chemical Society: Washington, D.C., Vol 88:14 pp. 3390-3395, July 20, 1966.

"Comparison of maleic anhydride grafted poly(propylene) with maleic anhydride-grafted polystyrene-block-poly(ethene-co-but-1-ene)-block-polystyrene as blend compatibilizers of poly(propylene)/polyamide-6 blends" by Joachim Rosch and Rolf Mulhaupt in Makromol. Chem., Rapid Commun., Vol 14, pp. 503-509, published by Huthig & Wepf Verlag Basel April 5, 1993.

"Studies on Polymer Blend of Nylon 6 and Polypropylene or Nylon 6 and Polystyrene Using the Reaction of Polymer", by Fumio Ide and Akira, Hasegawa in the Journal of Applied Polymer Science, Vol. 18, pp. 963-974, published by John Wiley & Sons, Inc., New York, New York January 1, 1974.

A chapter entitled "Functionalized Polymers and Macromonomers" in "Anionic Polymerization Principles and Practical Applications", by H.L. Hsieh and R.P. Quirk, pages 271-306, published by Marcel Dekker, Inc., New York, New York, January 1, 1996.

DIALOG ABSTRACTS

JP 06128432A (05/10/94) assigned to Mitsui Petrochemical Ind.

JP 03095263 (04/19/91) assigned to Japan Synthetic Rubber Co., Ltd.

JP 01123597 (05/16/85) assigned to Kalp Kogyo, K.K.

JP 56072037 (06/16/81) assigned to Kalp Kogyo, K.K.

JP 53055343 (05/19/78) assigned to Idemitsu Ind., K.K.

A copy of each publication is included for the express purpose of providing the Patent and Trademark Office with an ample opportunity to evaluate the same and to arrive at an independent assessment of their materiality, if any, with regard to the examination of the application.

In reviewing the enclosed copies of the above publications, the Examiner is requested to ignore any underscoring or highlighting which may appear because such markings may or may not have any relationship to the subject matter of the above-identified application. The copies being submitted with this Information Disclosure Statement are the best copies available at this time.

An examination of the present application considering the above documents is requested.

Respectfully submitted,

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June 3, 1998
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Effective 12/01/93